The Implementation of Brain-Writing Strategy to Enhance Hortatory Essay in High School Students' Writing

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Abstract. This research explores the implementation of the brain-writing strategy as an instructional approach to address the writing challenges encountered by students of secondary school level. Writing difficulties often arise due to incomplete involvement in the different stages of the writing process, especially a pre-writing stage. The aim of this study is to overcome the issues by utilizing the brain-writing strategy on the teaching of hortatory writing, while evaluating its impact on both student performance and perception. A triangulation mixed method was employed as the research design, integrating multiple data collection techniques from an observation, tests, and a classroom survey on perception. The study took place in a public high school, with a purposive sampling technique utilized to select 36 eleventh-grade students as participants. This sampling method ensured the deliberate selection of participants based on specific criteria pertinent to the research objectives. The findings that was collected from some observations illuminated the implementation of brain-writing strategy as an instructional strategy to enhance students' writing skills, especially in the content and structure. Through the analysis of data collected via various methods, the researchers gained insights into the improvements in students' performance and their perceptions of the strategy. This research contributes to the existing knowledge on effective writing instruction and offers valuable information for educators seeking innovative strategies to enhance students' hortatory writing abilities. Ultimately, the findings aim to inform educational practices and assist students in overcoming writing challenges.

Keywords: Brainstorming; Brain-writing; Hortatory essay; Pre-writing

1. Introduction

This study intends to explore the implementation of brain-writing strategy as part of the teaching of hortatory writing in secondary school levels. Writing is a kind of productive skill that means an ability to produce a message through written texts [1]. It is considered as the most difficult language skill for EFL students who require to write and arrange a text through highly complicated processes. The process that should be implemented includes a process of collecting data, arranging it, and producing a text [2]. Moreover, writing is a process for expressing the learners' ideas and project it to their writing which aims to make their readers understand the information in the texts [3] [4]. Therefore, the writing process has become an emerging topic of analysis how the students manage their problems in the writing activity [5].

There are three stages in the writing activity, namely pre-writing, composing and post-writing [6]. Of the stages, pre-writing is considered as the most important phase for some reasons namely the crucial role in the students' writing as it helps students find a comfortable situation that is a stress-free situation before doing their writing activity [7]. The premise support also that the comfortable state of pre-writing stage allows students think clearly and write whatever their mind thinking about [8]. It means that pre-writing may contribute to help the students be more relax in the non-stressful situation to bring out their idea creatively before doing their writing activity. Moreover, pre-writing will help students give a little bit of time to explore ideas to research the relevant sources they need for writing [9] [10]. After exploring the ideas, students have a dialogic session in a group and discuss the selected ideas by using their own thoughts [8]. Accordingly, during the pre-writing activity, students are able to express their insights that they have found for themselves or others and arrange it into their writing. From the reason about exploring students' ideas that are shared to their peers, pre-writing activity overcomes the writer's block [7]. When the students write an essay, the difficulties are mainly the writers' block, a moment when the students get stuck during writing and have no ideas to continue the writing process [9], The student sometime face the enxiety of grammatical fault or error [11], [12] .

When students do the pre-writing activity, they may propose important points to produce paragraphs. As a result, it may help the students organize their writing and avoid to make a pointless and an undirected paragraph. Thus, pre-writing is the main point in writing and a determinant how the text will be.

In the pre-writing stage, there are some activities that are mostly used by the learners including brainstorming, mind-mapping, listing, questioning and free-writing [13]. From those activities, brainstorming is one of the techniques that has some benefits for the learners. This technique was introduced by Alex Osborn that well-known as the most effective way to solve the writers' problem by developing an idea before starting to create a text [9]. Moreover, this technique is required by the students to think critically because they have to use their thought to design their writing before starting to write an essay [2]. For the procedures, the students give their idea in a simple way without being proven whether it makes sense or not [13]. Hence, brainstorming becomes one technique that is mostly used to design the students' critical thinking by giving their thought simply and developing their idea for producing a text. From this technique, there is a term called brain-writing which is an appropriate strategy that supports brainstorming time especially in the writing activity.

In general, brain-writing strategy procedure uses 6-3-5 technique that means there are six members in a group who share their three ideas for five minutes in each round by using an outline. Brain-writing becomes one of the strategies in brainstorming that has been succesfull to improve the students' writing skill that has been extensively studied in several years. In earlier research that conducted by [14] show that brain-writing becomes an effective strategy to teach writing for the students and develop their writing skills. Another research [15] reveals that brain-writing improves the students' writing ability while creating a narrative text. The students may understand how they will create a text without doubting to collect their ideas. Moreover, some other researchers have discussed this topic. They have discussed that brain-writing attracts the students' interest while they write a narrative text. They also state that brain-writing makes the students more excited in their learning process [3]. They support their view after conducting a research and conclude that brain-writing strategies has an impact to improve students' writing ability while writing a descriptive text [1]. Furthermore, someone agrees that brain-writing helps to stimulate the students how they develop their ideas and organize it into their writing [16]. Therefore, according to the findings that have been conducted by some researchers above, brain-writing has a great impact for students' writing both of increasing their interest and how they arrange their writing.

Brain-writing, as a pre-writing stage that represents a brainstorming section in writing, has a general instruction of in-group brainstorming as it should be done in some groups, namely he teacher divides the class into some groups that has six members [17]. In as the group, students are expected to share three ideas and write it into a paper, started from the first member, and the paper is distributed to the next members. All of the members should propose different ideas respectively upon the given topic. This grouping stage in the brain-writing is considered as a useful strategy in pre-writing because of the impacts. From the current condition that mostly teacher has, each student has to find out their own ideas and develop it into their paragraph writing. It becomes ineffective way because the students need more time to think about their ideas and start to write the text. Alternatively, brain-writing becomes the alternative instruction to collect ideas based on the individual's topic. The grouping stage makes the ideas become heterogeneous because the students may complete the each other students' idea from different perspectives and it helps them to have better pre-writing without any pressure. Students have a chance to propose the ideas freely, and it is expected to make the students show their argument without being afraid from someone else' opinion that somehow may judge their point of view. In other words, the grouping stage in the brain-writing helps students to have collective ideas that affect positively to the students' ideas and students' confidence to write a text.

For the reason about how beneficial this strategy, this research is expected to solve some problems related to the students' problems in the classroom. Based on an initial observation, it was found that students had difficulties in processing their idea into their writing. It affected in their final writing because it was unstructured and they tended to have unclear paragraphs. Moreover, based on the current teaching in writing, most of the teacher did not use the strategy in their learning when the students would write their text. The teacher tended to ask them to write the text directly without any preparation in their pre-writing strategy. Mostly, they skipped the pre-writing strategy whereas it was a crucial thing for their writing process. Accordingly, they would have stagnant ideas while they wrote the text because they did not process and outline their ideas that usually had been done in the pre-writing stage. It is supported by [18] who state that many teachers usually ignore to have a brainstorming question in the pre-writing stage that cause some problems for the students in

composing the text. For the first problem was the students did not know how to start the paragraph. They did not know how to concept their writing, so they just wrote the text directly without figuring it first. That was why they made unsystematic paragraphs. Moreover, teacher did not give the topic that was close to the students. Because they had skipped the pre-writing stage, they did not have time to know more about the topic. If the students did not familiar with the topic, the teacher shall ask them to search and find out the information around the topic. Otherwise, it could be easier to give them the familiar topic because they had previous knowledge that helped them to concept their writing. Therefore, for solving those problems that are related to the current teaching that have been explained, brain-writing strategy is suitable to be implemented in pre-writing stage.

From the current teaching that is usually applied by some English teachers and the effectiveness of brain-writing strategy in teaching writing especially its impacts in students' writing skill development, some researchers still want to prove and find out the impact of brain-writing in the certain levels. It has conducted four meetings for the research and implemented the brain-writing strategy in the secondary school [19]. As a result, this strategy develops the students' writing skill and change their classroom situation better than before. Besides that, they also reveal that brain-writing becomes an effective way especially for delivering an argument [20]. The students will have better understanding in the context of the given topic. They try to use this strategy to another level that is primary school [21]. As a result, they find that brain-writing stimulates their students' creativity when the students learn to write a story. Moreover, they also use this strategy for elementary Korean students and find that brain-writing gives them a chance to have creative thinking freely [22]. Therefore, from those findinds, mostly this strategy is used for the primary and secondary school students and it has been proven to be an effective strategy for improving their writing skills.

Nevertheless, it still needs to be examined in another level especially for senior high schools. It is rare to find out the implementation of brain-writing strategy in the senior high school that becomes the research gap of this study. In this study, brain-writing strategy is believed to be suitable for senior high school that is related to the exact kind of the text that they use. One of the texts that they learn in the classroom as their material is hortatory essay. This text needs more ideas to arrange the paragraph that will become the students' challenges. Moreover, the learning that is using the kind of this essay is expected to give a close topic to students and related to the brain-writing strategy that is applied in their learning. Thus, this research is conducted to know how brain-writing strategy can be implemented as the instructional strategy by the teacher when the students arrange their paragraph in hortatory essay and how the brain-writing strategy can affect in the students' performance and the students' perception.

2. Method

This research intends to find out how the implementation of brain-writing strategy that is also related to the improvement of the students' performance and the students' perception. A triangulation mixed methods design was used in which it used the quantitative and qualitative methods in the same time and used it with the equal weight. This design is a well-known approach and mostly used by many researchers for mixing methods [23]. In this study, the mixed method has quantitative and qualitative results. The result for the differences between pre-test and post-test or validate the qualitative results with the quantitative data. This research has an objective that focuses on the implementation of brain-writing strategy, the students' performance and the students' perception related to brain-writing strategy in the students' writing class of hortatory essay.

Research Subjects

This research involved 11th grade students in Sidoarjo (N=36). As it had been observed initially, the students experienced hesitance when starting to write a text because the teacher skipped the pre-writing stage that should have been a crucial stage for the students' development related on how they generate their ideas. In this study, the real teacher implemented the treatment and the researcher is an observer who observed the learning. Hence, brain-writing strategy is expected to be a treatment that solve that students' problem in their writing class due to the characteristics that brain-writing strategy is believed to improve the content of their writing. Before collecting the data, there was a non-randomly sampling that was conducted because of the previous observation. In the observation, students were confused to generate their ideas and express it into a writing. Besides that, it was found that students were not confidence to deliver their ideas.

Data Collection

There were three instruments that were used, those were observation field notes to observe the implementation of brain-writing strategy that was done by the teacher and the students when they had a writing class of hortatory essay, writing tasks to know the differences of students' score after implementing this strategy, and a questionnaire to reflect on the implementation of brain-writing strategy to know how the students' perception when they had a learning using the strategy.

Table 1. Data Collection and Instruments

Data Collection	Instruments	Data
Observation	Field notes	Implementation of brain-writing strategy by teacher and students' engagement
Test	Pre-test and Post-test (Writing tasks)	Students' writing performance
Reflection	Questionnaire	Students' perception on the implementation of brain-writing strategy

There were some data to be analyzed, those were quantitative and qualitative data that were taken in three meetings. In the first meeting, it focused on the teacher before doing brain-writing strategy. The meeting was recorded including all of the learning and the teachers' teaching scenario. After that, pre-test was given for knowing the students' writing skills before doing the brain-writing strategy. Therefore, the first meeting focused on the knowing the students' knowledge and writing skills before having the brain-writing strategy.

In the next meeting, the teacher used the brain-writing strategy using the teaching scenarios that had been discussed with the researcher. Before having the learning, the teacher divided the class into some groups. The grouping was divided by using purposive sampling. The sampling was chosen to give an equal distribution in the classroom. It was formed with some students who were smart and the other students who were less smart. There were six members in a group and they shall write their three ideas into a paper that was given. For doing all of those steps that, they had to finish in five minutes for each member. These steps were known as 6-3-5 technique based on the statement that had been explained. After that, all groups had a same theme that was a benchmark for their writing. It helped them to know an outline that directed them into their own topic. Then, each member in a group had own topic to be written. Therefore, they had a group that had one theme and their own topic that still be used in this strategy. Each member was given a paper and they had to move to the next member and completed the ideas from the previous member. It was expected to make a complete outline and gave heterogenous ideas from different members. In short, in the second meeting, the research focused on the implementation of brain-writing strategy in the students' learning.

After doing the second meeting, the last meeting was conducted. In this meeting, the students were given the teacher's feedback for their previous work in the second meeting. They had 60 minutes for revising their work that became their final writing. At this time, the students were given the question and answer sessions for understanding the teacher's feedback. After that, the questionnaire was given to know their perception related to the implementation of brain-writing strategy. In summary, the third meeting focused on the students' revision that became their final writing after the teacher's feedback and also focused on the students' perception after doing the brain-writing strategy. However, from three meetings that had been explained, there were some data that were explained as follows. For the observation, there were three data qualitative that were analyzed. In each meeting, all of the learning and teaching was recorded to find out on how the teacher implemented the brain-writing strategy. Moreover, the interactions during the classroom activities were observed as well by using field notes, so that there were three field notes that could explain the detail of the learning.

The students had pre-test and post-test that had an objective that was to know the differences between students' scores after using brain-writing strategy in their writing class. For the first, the pre-test was given in the first meeting when the teacher had not implemented yet the brain-writing strategy. After that, the teacher assessed their writing based on the writing rubric assessment and the proportion. Then, for the post-test, it was given in the second meeting after they implemented the brain-writing strategy. After that, the teacher gave some feedback for the students' writing. Same as the pre-test, the

teacher continued to assess their final writing as their post-test. Therefore, from the pre-test and post-test that had been given, the students' score became a quantitative data to be analyzed.

The questionnaire employed Likert-scales that had range 1 (strongly disagree), 2 (disagree), 3 (agree), and 4 (strongly agree) for the students in the last meeting. The questionnaire had thirteen statements that were related to the implementation of brain-writing strategy. The questions that had been given, including how the students had to deal with the brain-writing strategy, difficulties that they had when they used that strategy and some questions that were related to the topic and language that they used at that time. From that questionnaire, the result became the students' perception after implementing this strategy. After got the result from the questionnaire, it could be shown whether the students had a positive feedback from the strategy that was related on how the strategy could improve the students' learning especially in the writing class.

Data Analysis

Data were analyzed through triangulation process consisting the writing performance, implementation of the brain-writing strategy, and student's reflection. The analysis of writing used the writing scoring rubric of [24]. There were three teachers as the inter-rater to check the reliability of writing assessment, but the first inter-rater result that was used. There were the other qualitative data that were validated with the students' performance from two inter-rater scores. The scores were analyzed the data collected by interpreting them. From the instruments that were used, such as fieldnote, outline and final writing and feedback form, the data that were collected to analyze whether students had higher score or not, the students' feedback were positive or not, and how the students' perception and interaction when this strategy was used.

3. Findings
The Implementation of Brain-Writing Strategy

The implementation of brain-writing strategy was observed by using field notes observation rubric to know the learning situation when the teacher had a writing class of hortatory essay within three meetings on March 2023 in 90-minute duration for each meeting. In general, the implementation of brain-writing strategy was based on the teaching scenario that the teacher had and lesson plan. In terms of implementation of the brain-writing strategy, it focused on how the teacher employed the instructional strategy. The teacher had some steps for the learning as her teaching scenario that was used in the writing class of hortatory essay. The teacher inserted the procedures in the implementation of brain-writing strategy and some materials for supporting her teaching. The strategy was carried out in three meetings as the following classifications, namely building knowledge, pre-writing process & drafting, and revising & reflecting. The summary of that teaching scenario and the further findings is presented in table 2

Table 2. The Summary of Teaching Scenario

Meeting	Activities	Findings
I Building Knowledge	- Having a quiz as a pre-test - Explaining about social function / writer's purpose - Explaining text structures - Explaining language features - Using topic preferences	- The teacher indicated the current condition of the students from the quiz. - The teacher emphasized to explain the structures of essay. - The teacher allowed the students to have familiarity with the topic. - The students looked at their dictionary and were enthusiastic to translate the difficult words.

II Pre-writing & Drafting	- Implementing brain-writing - Outlining in the pre-writing - Drafting a hortatory essay	- The teacher directed the students step by step for implementing the brain-writing strategy. - The teacher gave a topic that was closer to the students. - The students were interested more to the given topic. - The teacher made a grouping strategy for collecting the students' ideas. - The students used mixed language using brackets in their outline.
III Revising & Reflecting	- Getting a teacher's feedback - Revising the writing - Submitting the final writing	- The students were more active to ask each other for translating their second language.

Initial Activity and Meeting I. Before having the teaching scenario of the implementation of brain-writing strategy, the teacher had a quiz as a pre-test for the students to indicate the existing condition of the students. After that, in meeting I, the teacher focused on building knowledge including structures and the content. For structure, the teacher explained about the social function or writer's purposes, text structures and the language features. More importantly for writing is the content that the teacher allowed the students to have familiarity with the topic by providing some titles. This strategy is good as to give an opportunity to the students to have their perspectives about the topic that helps to find their ideas. Moreover, the teacher allowed the students to look at their dictionary as to help them to translate their difficulties in their second language.

Meeting II. Teacher focused on the implementation or brain-writing strategy as the students' pre-writing and having a draft for their product in writing a hortatory essay. When the teacher implemented the strategy, she directed the students step by step for the procedures. It helped students to have a better pre-writing especially in collecting the students' ideas using grouping strategy. Besides that, at the second meeting, the teacher had the topic that closer to the students than in the first meeting that made the students attracted to the given topic. Moreover, the teacher gave an outline as to help to organize the students' ideas in a group. When they did pre-writing, the teacher found that the students used mixed language and using brackets in their outline to separate between Indonesian and English. After having the pre-writing stage, the students wrote a hortatory essay as their draft.

Meeting III. Teacher focused on the feedback for the students' draft and the students revised their writing based on that feedback. The feedback, that was given, was related to the aspects in the writing assessment rubric. After that, the students revised it and developed their draft into a better writing. In the middle of the revision time, the students were more participated to ask to their teacher and the other students. Mostly, they asked about the translation of their second language that appropriate in their context of the given topic. In the end of the meeting, the students submitted their hortatory essay for their final writing. \

Overall, students engaged during the learning activities and looked more enthusiastic in asking the questions to the teacher and to other students. When the teacher had a learning that is using brain-writing strategy, the students attracted more and participated to ask. They more focused to translate the native language to English. In the learning, the students were active to ask to their teacher and also to the other students to know the translation of their meaning. Besides that, they were active to find out the translation in their dictionary. Before it, they tended to look at the online translation that they could add whole of their essay in there and it could be translated automatically. It could make the students more bored to think about their meaning and changed into English. From this research, it was revealed that the students were attracted more to the learning after implementing this strategy.

Students' Performance after Implementing Brain-Writing Strategy

The students' performance was assessed based on writing tasks, namely pre-test that was conducted in meeting I before implementing the brain-writing strategy and post-test that was conducted in meeting III from their final writing. Those tests were assessed by three inter-raters and, it was based on the writing assessment rubric including the aspect of content, organization, grammar, vocabulary and mechanic that had own percentages for each aspect. From those components, data were analyzed before implementing the brain-writing strategy that was symbolized as T_0 and after the treatment that was symbolized as T_1. After that, the result of pre-test was found that all of the students were failed. After the implementation of brain-writing strategy, the result of post-test showed that 34 from 36 students or 94.4% of the students passed the test. Therefore, it was proven the brain-writing strategy helped students to improve their writing scores.

From those results, the other data that was analyzed was the changes from T_0 into T_1 that was symbolized as ΔT. In the next step, the growth for each student in their improvement among those writing components was analyzed to know the aspect that improved mostly. Accordingly, the result showed that the mean growth for each aspect that could be summarized; content (69.6%), organization (70.0%), grammar (62.4 %), vocabulary (58.2%) and mechanic (68.3%). Accordingly, the total of those improvements in the students' writing skills, reached 65.7% (see Attachment). Therefore, the result from those improvement scores showed that the brain-writing strategy mostly increased the aspect of content and organization.

Students' Perception towards the Use of Brain-Writing Strategy

The students' perception was from the questionnaire that was collected online. There were four aspects, those were students' difficulties, students' interest in brain-writing strategy, the effectiveness of brain-writing strategy and students' interest in the topic.

Table 3. The Result of Questionnaire Related to the Students' Perception

No	Statement	Objective	Score				Findings
			1	2	3	4	
1	I am confused to start to write a hortatory essay when using brain-writing strategy.	To know the students' difficulties in their writing.	3 8.3%	10 27.8%	14 38.9%	9 25%	• 63.9% of students agree. • 36.1% of stude disagree.
2	I have interested to use brain-writing strategy in writing a hortatory essay.	To know the students' interest in the brain-writing strategy.	2 5.6%	1 2.8%	15 41.7%	18 50%	• 91.7% of students agree. • 8.4% of students disagree
3	I think brain-writing strategy is efficient to save the time when writing a hortatory essay.	To know how effective the brain-writing strategy in the students' learning.	0 0%	1 2.8%	15 41.7%	20 55.6%	• 97.3% of students agree. • 2.8% of students disagree.
4	I think brain-writing strategy helps to find the ideas easier.	To know how effective the brain-writing strategy in the students' learning.	0 0%	2 5.6%	11 30.6%	23 63.9%	• 94.5% of students agree. • 5.6% of students disagree.
5	I think brain-writing strategy helps to find new perspectives from	To know how effective the brain-writing	0	1	12	23	• 97.2% of students agree.

No	Statement	Purpose					Summary
	other students in a group.	strategy in the students' learning.	0%	2.8%	33.3%	63.9%	• 2.8% of students disagree.
6	I am more comfortable to use the brain-writing strategy to collect the ideas than do it individually.	To know the students' interest in the brain-writing strategy.	2 / 5.6%	3 / 8.3%	15 / 41.7%	16 / 44.4%	• 86.1% of students agree. • 13.9% of students disagree.
7	I feel more confident to use the brain-writing strategy than do it individually.	To know how effective the brain-writing strategy in the students' learning.	1 / 2.8%	8 / 22.2%	14 / 38.9%	13 / 36.1%	• 75% of students agree. • 25% of students disagree.
8	I prefer to use the brain-writing strategy than the other strategy.	To know the students' interest in the brain-writing strategy.	3 / 8.3%	4 / 11.1%	10 / 27.8%	19 / 52.8%	• 80.6% of students agree. • 19.4% of students disagree.
9	I think the implementation of brain-writing strategy is suitable in the writing class of hortatory essay.	To know the students' interest in the brain-writing strategy.	1 / 2.8%	3 / 8.3%	15 / 41.7%	17 / 47.2%	• 88.9% of students agree. • 11.1% of students disagree.
10	I have interested to the topic that is used in the implementation of brain-writing strategy.	To know the students' interest related to the topic.	0 / 0%	3 / 8.3%	20 / 55.6%	13 / 36.1%	• 91.7% of students agree. • 8.3% of students disagree.
11	I understand about the topic that is used in the implementation of brain-writing strategy.	To know the students' interest related to the topic.	0 / 0%	5 / 13.9%	16 / 44.4%	15 / 41.7%	• 86.1% of students agree. • 13.9% of students disagree.
12	I think the topic that is used in the implementation of brain-writing strategy is close to my understanding.	To know the students' interest related to the topic.	0 / 0%	2 / 5.6%	19 / 52.8%	15 / 41.7%	• 94.5% of students agree. • 5.6% of students disagree.
13	The language that I mostly use to collect the ideas in the implementation of brain-writing strategy confidently.	To know the students' difficulties related to the language barrier.	EN / 22.2%	EN – ID / 50%	ID / 27.8%		• 22.2% of students prefer to use English. • 50% of students prefer to use mixed languages. (English & Indonesian) • 27.8% of students prefer to use Indonesian.

There were 4 aspects in the questionnaire that had been fulfilled by the students. Questions number 1, 13 for students' difficulties in writing, questions number 2, 6, 8, 9 for students' interest in using brain-writing strategy, questions number 3, 4, 5, 7 for the effectiveness of brain-writing strategy to improve students' writing skills, and questions number 10, 11, 12 for students' interest in the topic that was given in the implementation of brain-writing strategy. Overall, the students gave a positive perception towards brain-writing strategy with the highest aspects in terms of students' interest in using brain-writing strategy in questions number 2 (91.7%), 6 (86.1%), 8 (80.6%), and 9 (88.9%), in terms of the effectiveness of brain-writing strategy in questions number 3 (97.3%), 4 (94.5%), 5 (97.2%), and 7 (75%), in terms of students' interest in the topic in question number 10 (91.7%), 11 (86.1%), and 12 (94.5%).

On the other hand, there were two aspects which gained moderate percentages in the terms of students' difficulties in writing. It was proven in the first statement, 63.9% of the students agreed the statement that said the students felt confused when starting to write a hortatory essay. Mostly the reason was they had difficulties to use vocabulary, grammar and confusion in wording that was used for writing a hortatory essay. Meanwhile, 36.1% of the students disagreed that statement and mostly their reason were the brain-writing strategy helped them had a different opinion from the other students in a group that made a new insight for them so that they did not lost for words to start their writing. Secondly, the last statement that was related to the students' difficulties in writing related to the language barrier. It was proven that 50% of the students prefer to use mixed languages (English & Indonesian) when collecting their ideas. Meanwhile, the other students prefer to use Indonesian (27.8%) and English (22.2%). Therefore, mostly the students gave a positive perception even though there were some statements that related to their difficulties in writing that had average percentages.

4. Discussion
Discussion on the Implementation of Brain-Writing Strategy

This In general, the implementation of brain-writing strategy consists of building knowledge, doing pre-writing activity and the revising the students' writing. From those activities, this research focuses on pre-writing activity that becomes the stage when the implementation of the brain-writing strategy has been done. In the pre-writing process, brain-writing becomes an integral part because of the procedures that support to improve the students' writing skills. Besides that, this process is crucial for the students before starting to write a hortatory essay. It determines how the quality of the students writing will be. Moreover, towards doing the pre-writing activity, it is proven to determine the quality of writing in two aspects, those are content and the structure . It is supported by [25]–[27] who state that pre-writing affect the text quality and the result of their research reveal that the most of students' quality writing that highly improved are the structure and the content. Moreover, [28] add that pre-writing process improves mostly in the organizational coherence and the idea development that help the students to improve on how they express the meaning to their audience better. The organizational coherence is related to the structure of the students' writing and the idea development is related to the content of the students' writing [29]. Therefore, it is proven that towards having pre-writing process, the students improve the quality of writing especially for the organization and the content [30].

Supporting to the improvement of organization and the content in the students' writing, brain-writing strategy is proven as an appropriate strategy for improving those aspects. From five components in writing including content, organization, grammar, vocabulary and mechanic, brain-writing has been for highly improving the organization and the content in the students' writing [31]. Besides that, it was proven in the evaluation, that showed the students' performance were improved and the percentages that highly improved were the organization and content aspects. Accordingly, brain-writing is the best strategy as a pre-writing activity that the students have been done for improving their writing quality [14], [20], [32]. In conclusion, pre-writing should receive careful treatment by implementing the appropriate strategy, that is brain-writing strategy to support to the improvement of the students' writing.

Evaluation and Reflection on the Use of Brain-Writing Strategy

Overall, the performance of the students had significant differences before and after implementing brain-writing strategy. From the pre-test that had been done, 36 students had lower score than 75 as the minimum mastery standard for the learning. After implementing the brain-writing strategy, 34 students had higher score than the minimum score. It means that 94.4% of the students passed the test and it fulfilled the indicator that the brain-writing strategy was successful to improve

the students' writing skills. Besides that, it was supported by total mean in each aspect of the students' writing, including content, organization, grammar, vocabulary and mechanic. From those aspects, there was a total mean of students' improvement that had reached 65.7%. Accordingly, there were two aspects that had high improvement, those were content (69.6%) and organization (70.0%).

Those components are related to the implementation of brain-writing strategy that focuses on the collecting ideas by using grouping strategy. It is supported by [33] that states about how brain-writing strategy affects the students' content in writing. She says that brain-writing has a big role for students' content in writing because of its effect in their understanding that is related to the collecting ideas. The better understanding that they get, the better the content of writing that they have. In this stage, the strategy helps them to have better ideas by using grouping strategy for collecting the ideas. As a result, by using a grouping strategy in the implementation of brain-writing, the students have better of decision-making about choosing to eliminate or use the ideas from the other members in a group for their content in writing [34]. Moreover, brain-writing not only improves the content, but also improves the learners to be active in constructing the paragraphs [17]. This statement is related to the structure of the essay. In the implementation of brain-writing, the students are able to outline their ideas so that it helps them to arrange the text easily. It is supported by [20] who claim that brain-writing strategy makes the students understand deeply with the text type and the context that will be used. Therefore, towards implementing brain-writing strategy, it helps them to prepare the concept of the essay and helps them to continue for writing the text easily. Supporting on how the brain-writing strategy improves the aspect of content and organization in the students' writing, there is a previous research that has been done by [31] who find out that brain-writing helps students to improve those aspects in their writing rather than the other aspects. Indeed, from those explanation, the brain-writing strategy is proven to improve the students' writing both of the aspect of organization and content.

After knowing the improvement of the students' performance, based on the students' perception, it was found that students' experiences during the implementation in meeting II, the teacher gave a chance for topic selection based on the students' preference. In other words, the selected topic that was used is closer to the students. The topic preference was proven to improve the students' interest that affected in their writing performance in their learning. [35] agrees that topic selection helps the students to increases to their writing fluency. It is also supported by [36], towards topic-based writing activity, students have better motivation and it enhances to their writing skills. [37] also finds out that self-selected topics that is done by the students' preferences improve their writing performance better than when they use the teacher assigned topic. Therefore, the topic preferences that students have in the implementation of brain-writing strategy affect positively to the students' quality of writing.

In terms of language barrier, 50% of the students preferred to use mixed languages in collecting ideas when implementing the brain-writing strategy. It was shown in their outline of brain-writing that most of the students used brackets to separate the language that they did not know. For this case, it indicates that students have language barrier when they collect their ideas in the middle of the implementation of the strategy. [38] support this event with their statement that English language becomes the most challenge for the second language students to master. Moreover, it is supported by [39], [40] who state that the most problems of the EFL students in writing is their lack of vocabulary mastery and language used in their second language. Thus, it was proven from the students' perception that language barrier became their difficulties so that it impacted in their vocabulary aspect that had the lowest improvement that the other aspects. From those findings, there is a correlation between topic preferences and the language barrier. If the students are familiar with the topic, they will not get difficulty in writing. However, the familiarity of the students' topic does not always become the determinant to improve their writing performance. The students may have enough idea on the topic but they do not always have the competence on the language to express their idea (Septiana, 2014). Indeed, the topic selection strategy and the language barrier become the factors that affect in the students' writing performance. Accordingly, when the teacher has a topic selection strategy in the writing class, it should be supported by the other strategy to overcome the students' language barrier to help the improvement of students' writing better.

5. Conclusion

Based on the implementation of brain-writing strategy consists of three meetings that have been done and the implementation focuses on building knowledge, doing pre-writing and revising the students' writing. When the students have a pre-writing process as their planning for writing a hortatory essay, the students have a chance for concepting their essay. This process is important for the students' learning, because it gives the students more time to explore their ideas related to the

topic. As a result, they will not get difficulty in arranging the paragraphs for the hortatory essay. This process is supported by implementing the brain-writing strategy. During the implementation of brain-writing strategy, the students collect their ideas by having grouping strategy because it helps the students to have different perspectives because of heterogeneous opinions from the members in the group. Besides that, this strategy becomes a crucial thing for the students as their pre-writing to help the students to get ideas easier. Therefore, the implementation of brain-writing strategy, that supported with the teaching scenario that the teacher has in the pre-writing process, helps the students to overcome their problems in the writing.

In addition, this strategy improves the students' writing quality that has proven in the improvement of students' performance. There are two aspects that highly improved in this research, those are the aspect of organization and content. Indeed, pre-writing process that is supported by implementing the brain-writing strategy is important to help the students before starting to write especially for the organization and content of students' writing. In terms of the students' perception, they perceived a difficulty in the middle of implementation of brain-writing strategy. The students have difficulty in the language barrier that is related to their second language so that they do not know some vocabularies in their second language. As a result, when collecting the ideas, mostly they use mixed languages (English—Indonesian) and use the brackets for differentiate between those languages. Indeed, the result of language barrier as the students' problem becomes the limitation of this research that supported by the percentages of vocabulary aspect that has lower score than the other aspects.

Based on the conclusion that has been explained, there is a students' problem related to the language barrier. For overcoming that problem, there is a recommendation related to the strategy that is used by the teacher. The teacher should introduce some vocabularies related to the topic given. This step should be done in the middle of the implementation of brain-writing strategy. It may help students to know some vocabularies with its meaning that is appropriate with the context of the topic. As a result, the students will not have difficulties in their second language and save more time for writing a hortatory essay than translating some words that they do not know before. Besides that, for the further research, it is suggested to accommodate the language barrier problem. It can be another strategy that helps to overcome the students' language barrier in the pre-writing activity. From those recommendation, it is expected that this research helps to be a reference for further research and support the existing knowledge in the same field of the study.

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